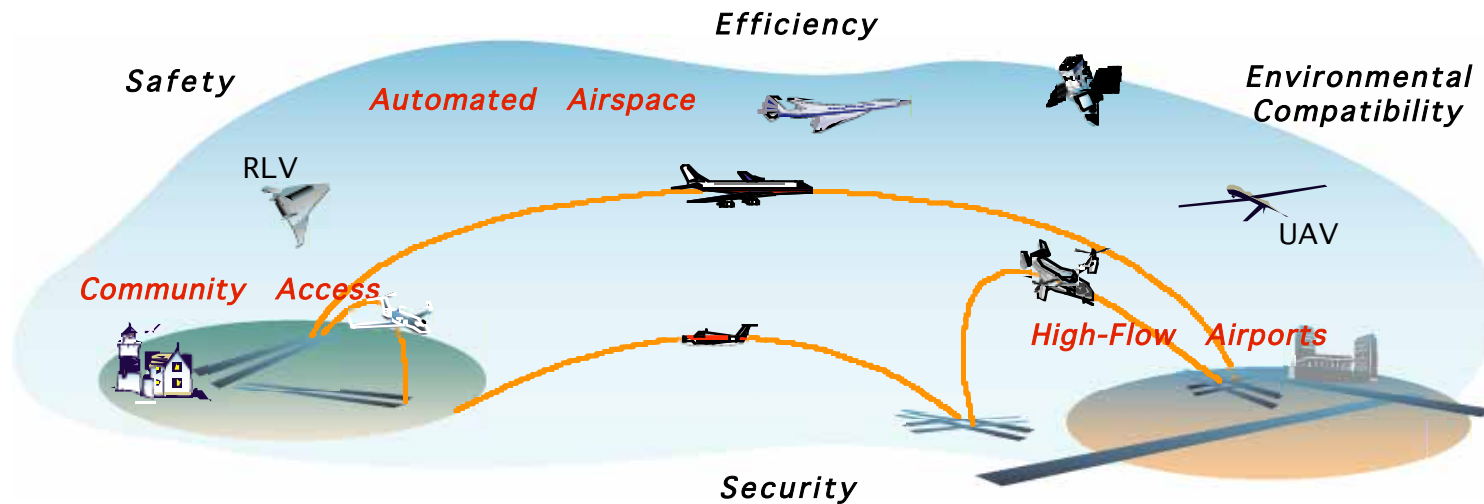


VIRTUAL AIRSPACE MODELING AND SIMULATION PROJECT

Technical Interchange Meeting IV



Harry Swenson
VAMS Project Manager

February 10-11, 2004

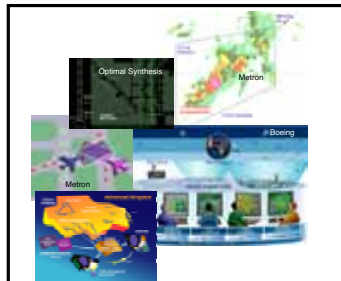
NASA Ames Research Center
Moffett Field, CA

- **The Purpose of this TIM is to share VAMS results:**
 - Self-evaluations of the VAMS Air Transportation Capacity Increasing Concepts.
 - The use of the Concept Evaluation System (ACES) Build 1
 - > For preliminary assessments of some of the VAMS concepts.
 - > To assess aspects of the RTCA future concept.
 - > To conduct a limited capacity sensitivity study of the National Airspace System.
 - ACES Build 2 information.
 - Status of the VAST Real-Time accomplishment.
 - Evolving FAA near and far-term plans for the en-route airspace.
 - VAMS Demand baselines for analysis.
- **As always, have an opportunity to interact with your VAMS colleagues.**

Approach

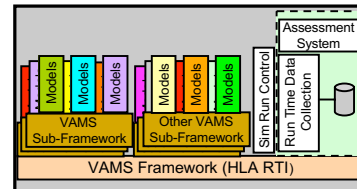
Virtual Airspace Modeling & Simulation - TIM 4, Feb. 10-11, 2004

Set of Operational Concepts

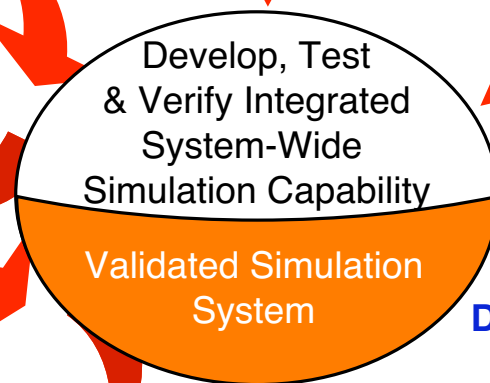
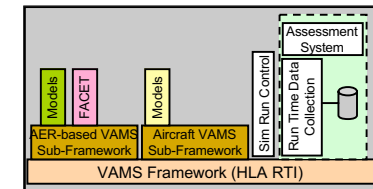


Develop New Concepts

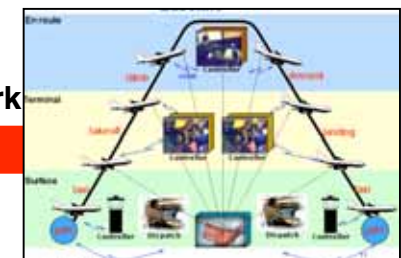
Improved Models



Existing & New Models



Benchmark

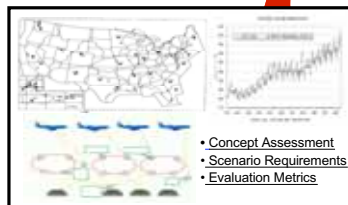


Baseline

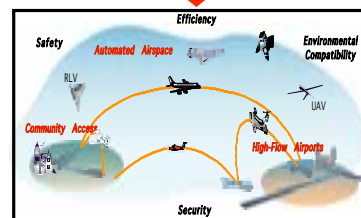
Deliverable

Deliverable

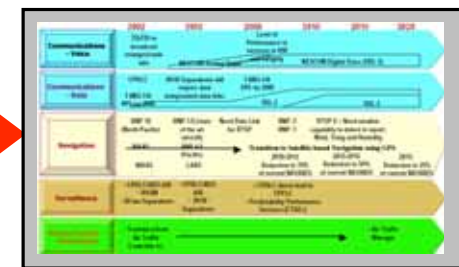
Deliverable



Scenarios & Metrics



Evaluated & Assessed Revolutionary Operational Concepts



Technology Roadmaps

Schedule

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Concept Development

System-Level Integrated Concepts

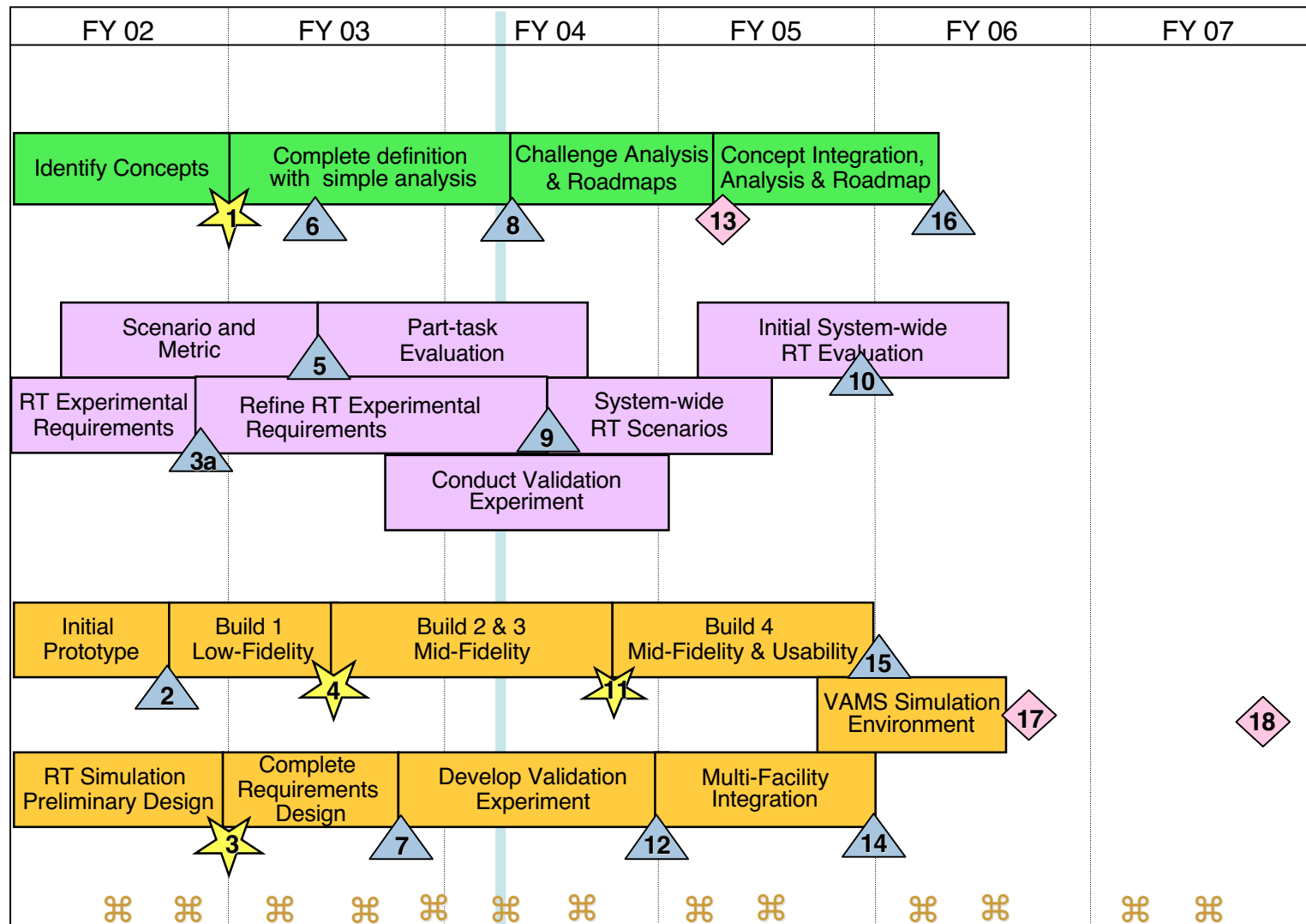
System Evaluation & Assessment

Virtual Airspace Simulation Technologies

Non Real-Time

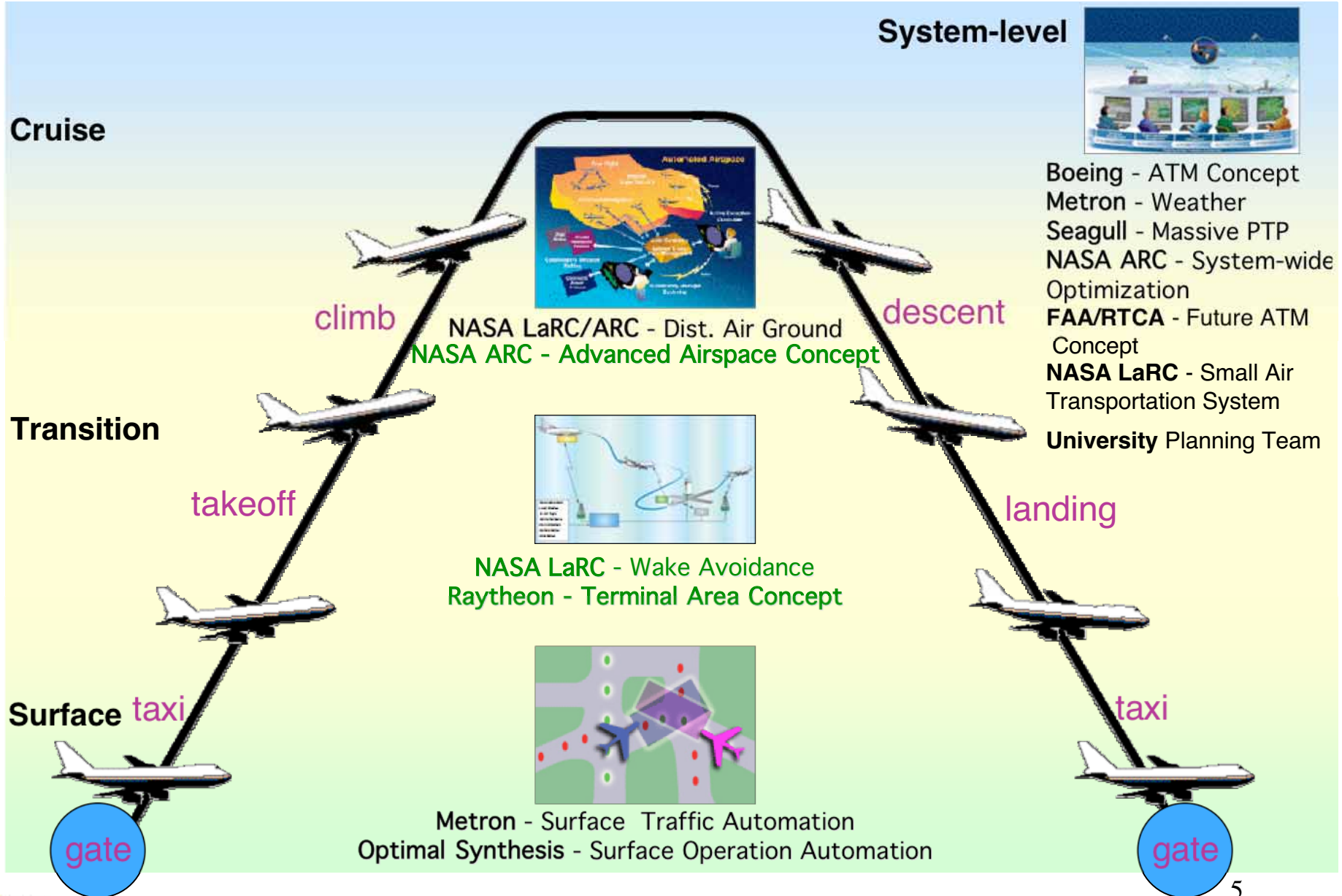
Real-Time (R-T)

Technical Interchange Meetings and Workshops



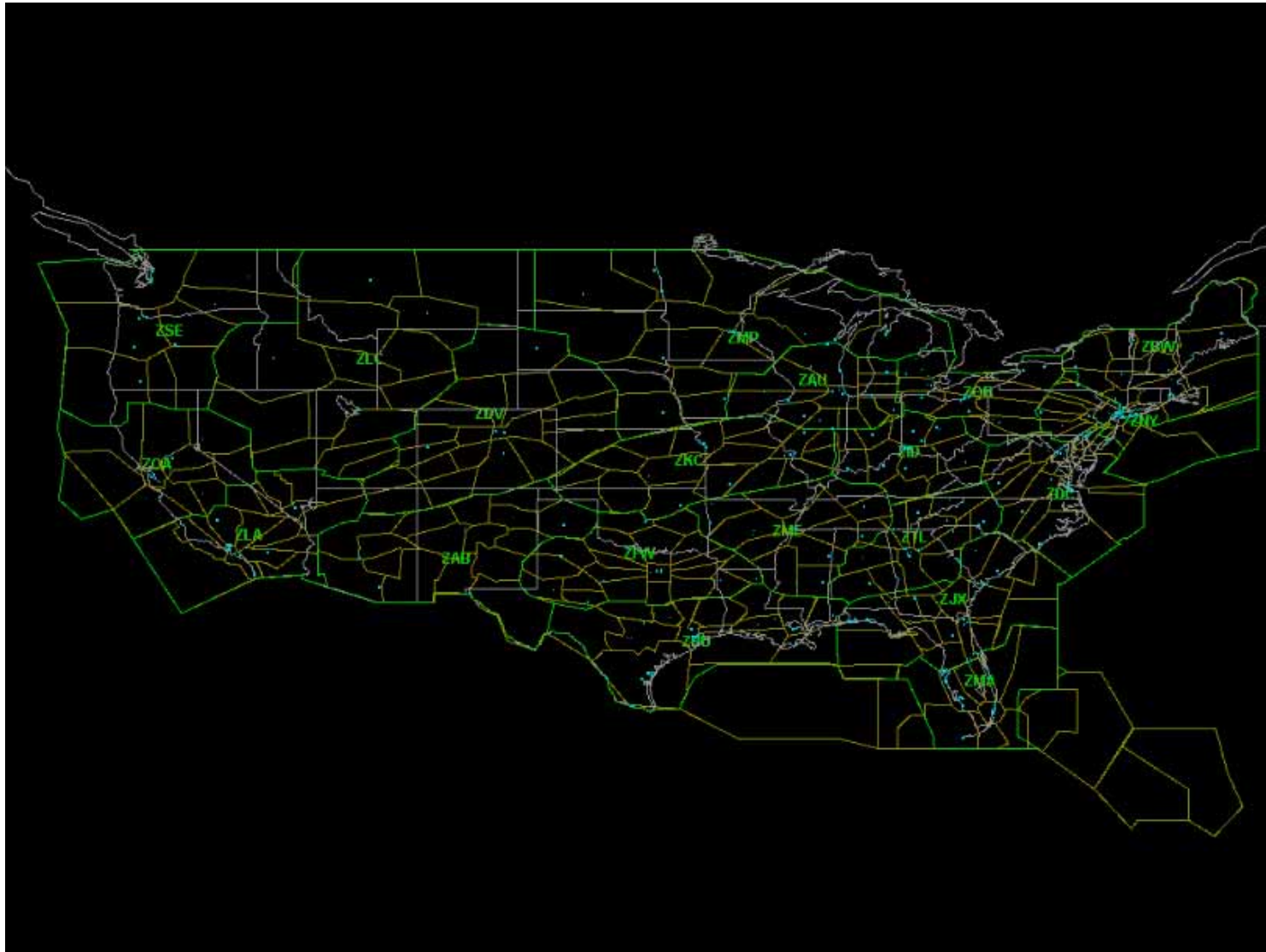
GPRA Milestones
 Level 1 Milestones
 Level II Milestones
 Technical Interchange

Operational Concept Solutions



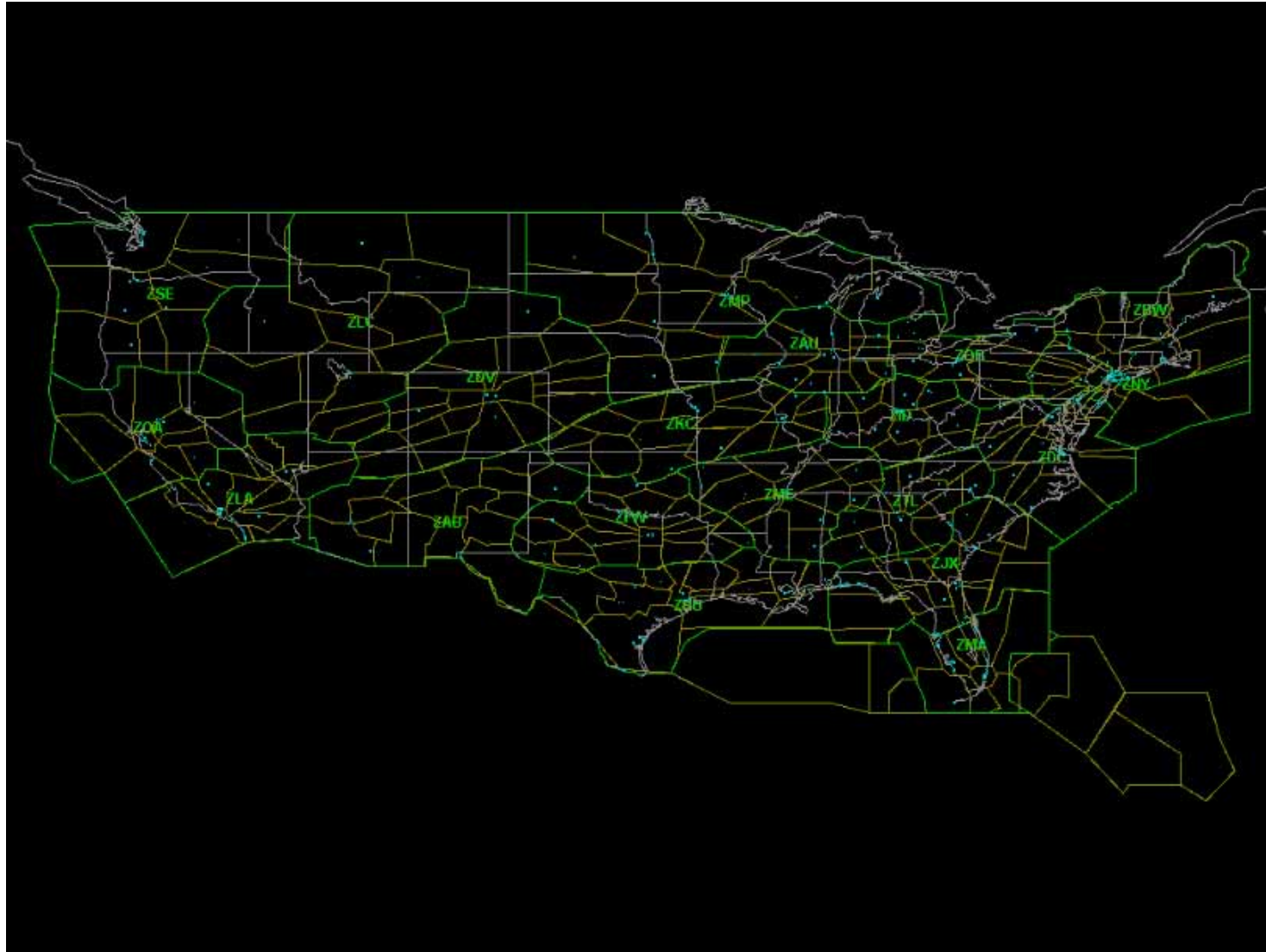
ACES Simulation May 17, 2002

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ACES Simulation with Demand Estimations for 2022

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Agenda

PST	10-Feb Tuesday	11-Feb Wednesday
7:30	Facility opens	Facility opens
7:45	Continental Breakfast and	Continental Breakfast
8:00	Meeting Registration	
8:15	Welcome and Overview of TIM 4	Daily Agenda
8:30	(Swenson)	Concept 9 Self-Evaluation
8:45	Self-Evaluation Intro (Fong)	Surface Operation Automation
9:00	Concept 1 Self-Evaluation	Research (Optimal Synthesis)
9:15	Massive P-to-P On-Demand	Concept 10 Self-Evaluation
9:30	Air Transportation (Seagull)	RTCA Concept Simulation
9:45	Concept 2 Self-Evaluation	(Titan SRC)
10:00	ATM Capacity Increasing Concept	Break
10:15	(Boeing)	
10:30	Break	Univ. Concept Assessment
10:45		(Donohue)
11:00	Concept 3 Self-Evaluation	Brief-out of Prior Workshops
11:15	All-Weather Capacity-Increasing	(Quon)
11:30	Technologies (Metron)	ACES RTCA Results
11:45	Concept 4 Self-Evaluation	(Miller)
Noon	Terminal Area Capacity Enhancing	
12:15	Concept (Raytheon)	Catered Lunch
12:30		
12:45	Catered Lunch	
1:00		ACES Concept Results:
1:15		Session Overview (Bjarke)
1:30	Concept 5 Self-Evaluation	ACES Build 1.2 Results:
1:45	Wake Vortex Avoidance	- Prelim. Conc. Analysis (Meyn)
2:00	(NASA LaRC)	- NAS Perf. Analysis (Zelinski)
2:15	Concept 6 Self-Evaluation	ACES Build 2 (Cobb)
2:30	Advanced Airspace System	VAST-RT Results (Malsom)
2:45	Concept (NASA ARC)	
3:00	Break	Break
3:15	Concept 7 Self-Evaluation	
3:30	System-Wide Optimization	En Route Operational Evolution
3:45	(NASA ARC)	Plan (Bradford)
4:00	Concept 8 Self-Evaluation	
4:15	Cap. Improve. Through Automated	Demand Baseline
4:30	Surface Traffic Control (Metron)	(Lozito)
4:45	Wrap-up	Wrap-up (Swenson)
5:00	Management Reserve	Management Reserve
5:30		